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FOREST INSECT INVESTIGATIONS

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FOREST INSECT SURVEY

SHASTA NATIONAL FOREST

SEASON OF 1946

By

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SUBJECT—

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SEASON OF 1946

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April 24, 1947

Forest Insect Survey
SHASTA NATIONAL FOREST

Season of 1946

INTRODUCTION

The annual forest insect survey of the Shasta National Forest was made jointly by R. C. Hall and P. C. Johnson of the Forest Insect Laboratory, Berkeley, California in late September and mid-October 1946. Johnson covered the Goosenest, Scott and Trinity Ranger Districts, and Hall was responsible for the balance of the forest. Data for this survey were collected from permanent roadside plots, road counts and reconnaissance. H. E. Branagh, Assistant Ranger from the Sacramento District, assisted Hall on his part of the survey. Assistance was also furnished to both Bureau men by the local district rangers and their staffs, by members of the McCloud River Lumber Company, and members of the staff of the California State Division of Forestry. The forest supervisor also arranged for the use of a jeep in testing out this vehicle for the collection of road strip sample data.

The Burney area, a part of which is on the Shasta National Forest, is covered in a separate report by J. W. Bongberg and R. C. Hall and will not be included in this report.

CHARACTER OF THE 1946 INFESTATION

For the Shasta National Forest as a whole the character of the 1946 infestation was endemic. Losses in the virgin ponderosa pine type showed some epidemic tendencies in local areas. Losses in the mixed conifer type were endemic throughout the whole forest. One outstanding characteristic of the 1946 infestation was the very light loss in sugar pine. Losses in ponderosa pine caused by the western pine beetle, Dendroctonus brevicomis, those in sugar pine caused by the mountain beetle, D. monticolae, those in white fir caused by the fir engraver, Scolytus ventralis, and those in Douglas fir caused by the fir flatheaded borer, Melanophila drummondi were found to occur usually in individual trees in advanced stages of decadence. The only real grouping tendencies observed were those associated with the killing of ponderosa pine by the California five-spined engraver beetle, Ips confusus, in a few local areas.

INFESTATION CHARACTERISTICS ON SPECIAL AREAS

Although the over-all loss picture for the 1946 season was generally endemic there were a few special areas where epidemic tendencies were observed and these will be discussed by various ranger districts.

The Pit District

The Clark Creek Unit in the vicinity of Rock Creek is the only local area where losses appear to be on an epidemic level. This is in the pure ponderosa pine type just west of the area covered by control in 1945. The road strip sampling this local area, Rock Creek, showed a cruised loss of about 140 board feet per acre for 1946. The strip sampling the treated area, Clark Creek, had a cruised loss of only 24 board feet per acre.

The McCloud District

Practically all of the ponderosa pine type in this district is now cut-over. A few of the remaining parcels near Harris Mt., Trout Creek and Porcupine Butte were sampled by road counts and reconnaissance, and it was found that losses in ponderosa pine in all of these areas are approaching epidemic proportions. Road counts, Harris Mt., Lost Iron Springs, Harris Springs and Porcupine Butte, sample these areas with the results as are shown in Table 1. On the basis of these samples it is estimated that the 1946 losses will average between 125 and 150 board feet per acre in the virgin stands remaining in these areas.

There is some indication of scattered Ips confusus activity on the McCloud Flat cut-over in the killing of small groups of knobcone and ponderosa pine poles and in the occasional top killing of large reserve trees, but this activity does not appear to have changed from that of the previous year.

Shasta National District

The bulk of the remaining virgin pine timber in this district is located in the Bull Meadows country. Approximately 10 sections of virgin timber remain with most of this in government ownership. The results of two samples in this area are represented in RD 7 and Bull Meadows strips in Table 1. Data from RD 7 in the highway screen along U. S. Highway #97 show that the high losses of the 1944-45 seasons are subsiding slightly. This road screen in a Hazard V area is still vulnerable, however, and should be watched closely for evidences of further abnormal insect activity. Losses in the Bull Meadows stands are endemic but are heavier than should be tolerated in a well managed forest.

Trinity District

The only serious insect activity in the Trinity District was found in several large groups of ponderosa pine poles and trees killed by Ips on the west bank of the Trinity River several miles south of Trinity Center.

RECOMMENDATIONS

The California State Division of Forestry, in cooperation with private owners, has already taken action to control the Ips infestation in the

Trinity District. No further direct control action is recommended for the Shasta for the 1946 infestation. Future management plans, both for public and private timber, should consider the possibility of indirect control through sanitation-salvage logging in the Trout Creek, Harris Mt., Porcupine Butte and Clark Creek areas in the remaining virgin ponderosa pine stands.

Table 1

TIMBER LOSSES CAUSED BY BARK BEETLES ON THE SHASTA NATIONAL FOREST

Strip Name	Timbered Ac.	Ranger Dist.	1946 Cruised Losses - By Species: P.P. No. Trees	P.P. Volume	S.P. No. Trees	S.P. Volume	W.F. No. Trees	W.F. Volume	D.F. No. Trees	D.F. Volume	All Species No. Trees	All Species Total Volume	Volume per Ac.	Timber Type
Timber Crater*	400	Pit	26	13,700							26	13,700	34	PP
Clark Creek*	280	Pit	4	6,080					1	730	5	6,810	24	PP
Bosworth*	96	Pit	4	4,610	1	1,670			1	3,150	6	9,430	98	MC
Rock Creek*	160	Pit	20	19,390	1	3,300	1	1,270	1	4,310	23	28,270	177	PP-MC
Dead Horse*	160	McCloud	3	13,480	1	1,210	3	5,050	1	4,700	8	24,440	153	MC
Deadman Creek*	32	McCloud	1	6,210							1	6,210	194	MC
Bartle Gap*	68	McCloud					2	1,550			2	1,550	23	MC
Harris Mt.	264	McCloud	14	27,280			2	7,130			16	34,410	130	PP
Lost Iron Wells	104	McCloud	8	25,440							8	25,440	245	PP
Harris Springs	248	McCloud	9	21,050			3	3,400			12	24,450	99	PP
Porcupine Butte	160	McCloud	12	15,280	1	1,670	1	1,810			14	18,760	117	PP
RD. 7*	100	Goosenest	2	1,070							2	1,070	11	PP
Bull Meadow	100	Goosenest	6	18,000							6	18,000	180	PP
Castle Creek	56	Trinity	2	2,500	1	3,000					3	5,500	98	PP
Mumbo Creek	48	Trinity			1	250					1	250	5	PP
Rams Horn Creek	20	Trinity	1	1,250							1	1,250	62	PP
Davis Creek	80	Trinity	1	3,000							1	3,000	38	PP
All Strips	2,376		113	178,340	6	11,100	12	20,210	4	12,890	135	222,540	94	
1946 Vol. per acre loss cruised				75		5		9		5			94	
1946 Vol. per acre loss estimated				88		6		9		5			108	

* All trees on these road strips examined, diameters measured, blazed numbered and mapped. On the other strips the diameter of each infested tree was estimated, and the trees were not numbered but were mapped.

Circulated:

1 Forest Supervisor
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